* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 12:32:44 ON 23 MAR 2005

=> file .meeting
'EVENTLINE' IS NOT A VALID FILE NAME
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files
that are available. If you have requested multiple files, you can
specify a corrected file name or you can enter "IGNORE" to continue
accessing the remaining file names entered.
ENTER A FILE NAME OR (IGNORE):ignore

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'AGRICOLA' ENTERED AT 12:32:59 ON 23 MAR 2005

FILE 'BIOTECHNO' ENTERED AT 12:32:59 ON 23 MAR 2005

FILE 'CONFSCI' ENTERED AT 12:32:59 ON 23 MAR 2005

FILE 'HEALSAFE' ENTERED AT 12:32:59 ON 23 MAR 2005

FILE 'IMSDRUGCONF' ENTERED AT 12:32:59 ON 23 MAR 2005

FILE 'LIFESCI' ENTERED AT 12:32:59 ON 23 MAR 2005

FILE 'MEDICONF' ENTERED AT 12:32:59 ON 23 MAR 2005

FILE 'PASCAL' ENTERED AT 12:32:59 ON 23 MAR 2005

=> (malaria or plasmodium) and (nitric oxide or arginine or nitrosothiol)

L1	9	FILE AGRICOLA
L2	107	FILE BIOTECHNO
L3	7	FILE CONFSCI
L4	1	FILE HEALSAFE
L5	0	FILE IMSDRUGCONF
L6	147	FILE LIFESCI
L7	0	FILE MEDICONF
L8	121	FILE PASCAL

TOTAL FOR ALL FILES
L9 392 (MALARIA OR PLASMODIUM) AND (NITRIC OXIDE OR ARGININE OR NITROSO THIOL)

=> 19 and parasitized

L10	0	FILE AGRICOLA
L11	4	FILE BIOTECHNO
L12	0	FILE CONFSCI
L13	0	FILE HEALSAFE

L14 0 FILE IMSDRUGCONF
L15 8 FILE LIFESCI
L16 0 FILE MEDICONF
L17 4 FILE PASCAL

TOTAL FOR ALL FILES
L18 16 L9 AND PARASITIZED

=> dup rem
ENTER L# LIST OR (END):l18
DUPLICATE IS NOT AVAILABLE IN 'IMSDRUGCONF, MEDICONF'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L18
L19 10 DUP REM L18 (6 DUPLICATES REMOVED)

=> d l19 ibib abs total

L19 ANSWER 1 OF 10 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 2005:13550 LIFESCI
TITLE: Induction of the CD23/**nitric oxide** pathway in endothelial cells downregulates ICAM-1 expression and decreases cytoadherence of **Plasmodium** falciparum -infected erythrocytes
AUTHOR: Pino, P.; Vouldoukis, I.; Dugas, N.; Conti, M.; Nitcheu, J.; Traore, B.; Danis, M.; Dugas, B.; Mazier, D.
CORPORATE SOURCE: INSERM U511, Immunobiologie Cellulaire et Moleculaire des Infections Parasitaires, CHU Pitie-Salpetriere Paris VI, 75013 Paris, France.; E-mail: mazier@ext.jussieu.fr
SOURCE: Cellular Microbiology [Cell. Microbiol.], (20040900) vol. 6, no. 9, pp. 839-848.
ISSN: 1462-5814.
DOCUMENT TYPE: Journal
FILE SEGMENT: K
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Cytoadherence of **parasitized** red blood cells (PRBCs) to postcapillary venules and cytokine production are clearly involved in the pathogenesis of cerebral **malaria**. **Nitric oxide** and TNF- alpha have been proposed as major effector molecules both in protective and physiopathological processes during **malaria** infections. **Nitric oxide** production has been shown to be induced by engagement of CD23 antigen. This study aimed to investigate the potential role of the CD23/**nitric oxide** pathway in the control of the cytoadherence of PRBCs on human endothelial cells. We demonstrate that normal human lung endothelial cells (HLECs) are able to express the low affinity receptor for IgE (Fc[isin]RII/CD23), following cell incubation with interleukin 4 or PRBCs. Ligation of the CD23 antigen by a specific anti-CD23 monoclonal antibody at the cell surface of HLECs was found to induce iNOS mRNA and protein expression, NO release and P. falciparum killing. In addition, the specific CD23-engagement on these cells also induced a significant decrease in ICAM-1 expression, an adhesion molecule implicated in PRBCs cytoadherence. These data not only described for the first time the expression of a CD23 antigen at the cell surface of endothelial cells but also suggest a possible new regulatory mechanisms via the CD23/NO pathway during **malaria** infection.

L19 ANSWER 2 OF 10 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 2003:105232 LIFESCI
TITLE: **Plasmodium** falciparum-Infected Erythrocyte Adhesion Induces Caspase Activation and Apoptosis in Human Endothelial Cells
AUTHOR: Pino, P.; Vouldoukis, I.; Kolb, J.P.; Mahmoudi, N.; Desportes-Livage, I.; Bricaire, F.; Danis, M.; Dugas, B.; Mazier, D.
CORPORATE SOURCE: INSERM U511, Immunobiologie Cellulaire et Moleculaire des Infections Parasitaires, Centre Hospitalier-Universitaire Pitie-Salpetriere, Universite Pierre et Marie Curie, and INSERM U365, Institut Curie, Paris, France

SOURCE: Journal of Infectious Diseases [J. Infect. Dis.], (20030415) vol. 187, no. 8, pp. 1283-1290.
ISSN: 0022-1899.
DOCUMENT TYPE: Journal
FILE SEGMENT: K
LANGUAGE: English
SUMMARY LANGUAGE: English

AB During **Plasmodium** falciparum infection leading to cerebral **malaria**, cytokine production and cytoadherence of **parasitized** erythrocytes (PRBCs) to postcapillary venules are involved. We demonstrate that PRBC adhesion induces apoptosis in human endothelial cells (HLECs). PRBC adhesion modulated HLEC gene expression in tumor necrosis factor- alpha superfamily genes (Fas, Fas L, and DR-6) and apoptosis-related genes (Bad, Bax, caspase-3,SARP 2, DFF45/ICAD, IFN-gamma receptor 2, Bcl-w, Bik, and iNOS). Apoptosis was confirmed by (1) morphological modifications by electron microscopy, (2) annexin V binding, (3) DNA degradation, by measuring intracytoplasmic nucleosomes, and (4) caspase activity. The apoptotic stimulus was physical contact between HLECs and PRBCs and not parasite-secreted molecules. In addition, it was found that cytoplasmic (caspase 8) and mitochondrial (caspase 9) pathways were involved in this process. These data not only describe the direct apoptotic effect of PRBC adhesion on endothelial cells but also provide new useful tools that allow an evaluation of potential pharmaceuticals.

L19 ANSWER 3 OF 10 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE

ACCESSION NUMBER: 2001:32096481 BIOTECHNO
TITLE: Cerebral **malaria** in mice: Interleukin-2 treatment induces accumulation of γδ T cells in the brain and alters resistant mice to susceptible-like phenotype
AUTHOR: Haque A.; Echchannaoui H.; Seguin R.; Schwartzman J.; Kasper L.H.; Haque S.
CORPORATE SOURCE: Dr. A. Haque, INSERM U399, Faculte de Medecine, Universite de la Mediterranee, 27 Bvd. Jean Moulin, 13385 Marseille, France.
E-mail: h.azizul@medecine.univ-mrs.fr
SOURCE: American Journal of Pathology, (2001), 158/1 (163-172), 47 reference(s)
CODEN: AJPAA4 ISSN: 0002-9440
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English

AN 2001:32096481 BIOTECHNO

AB In this study, we report that infection with **Plasmodium** yoelii 17XL, a lethal strain of rodent **malaria**, does not result in death in the DBA/2 strain of mice. In contrast to BALB/c mice, DBA/2 mice developed significantly less parasitemia and never manifested symptoms of cerebral **malaria** (CM) on infection with this parasite. Moreover, the histological changes evident in the brain of susceptible BALB/c were absent in DBA/2 mice. Interestingly, the resistant DBA/2 mice when treated with recombinant interleukin (IL)-2, were found to develop CM symptoms and the infection became fatal by 6 to 8 days after infection. This condition was associated with an augmented interferon-γ and **nitric oxide** production. Unexpectedly, IL-10 levels were also elevated in IL-2-treated DBA/2 mice during late stage of infection (at day 6 of infection) whereas the inverse relationship between IL-10 and interferon-γ or **nitric oxide** was maintained in the file early stage of infection (at day 3 after infection). The level of tumor necrosis factor-α production was moderately increased in the late phase of infection in these mice. Histology of brain from IL-2-treated mice demonstrated the presence of **parasitized** erythrocytes and infiltration of lymphocytes in cerebral vessels, and also displayed some signs of endothelial degeneration. Confocal microscopical studies demonstrated preferential accumulation of γδ T cells in the cerebral vessels of IL-2-treated and -infected mice but not in mice

treated with IL-2 alone. The cells recruited in the brain were activated because they demonstrated expression of CD25 (IL-2R) and CD54 (intercellular adhesion molecule 1) molecules. Administration of anti-γδ mAb prevented development of CM in IL-2-treated mice until day 18 after infection whereas mice treated with control antibody showed CM symptoms by day 6 after infection. The information concerning creating pathological sequelae and death in an otherwise resistant mouse strain provides an interesting focus for the burden of pathological attributes on death in an infectious disease.

L19 ANSWER 4 OF 10 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE

ACCESSION NUMBER: 2000:30497704 BIOTECHNO
TITLE: Central role of endogenous gamma interferon in protective immunity against blood-stage **Plasmodium** chabaudi AS infection
AUTHOR: Su Z.; Stevenson M.M.
CORPORATE SOURCE: M.M. Stevenson, Montreal General Hospital, Research Institute, 1650 Cedar Ave., Montreal, Que. H3G 1A4, Canada.
E-mail: mcev@musica.mcgill.ca
SOURCE: Infection and Immunity, (2000), 68/8 (4399-4406), 47 reference(s)
CODEN: INFIBR ISSN: 0019-9567
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English

AN 2000:30497704 BIOTECHNO
AB The role of endogenous gamma interferon (IFN-γ) in protective immunity against blood-stage **Plasmodium** chabaudi AS **malaria** was studied using IFN-α gene knockout (GKO) and wild-type (WT) C57BL/6 mice. Following infection with 10.sup.6 **parasitized** erythrocytes, GKO mice developed significantly higher parasitemia during acute infection than WT mice and had severe mortality. In infected GKO mice, production of interleukin 12 (IL-12) p70 and tumor necrosis factor alpha in vivo and IL-12 p70 in vitro by splenic macrophages was significantly reduced compared to that in WT mice and the enhanced **nitric oxide** (NO) production observed in infected WT mice was completely absent. WT and GKO mice had comparable numbers of total nucleated spleen cells and B220.sup.+ and Mac-1.sup.+ spleen cells both before and after infection. Infected WT mice, however, had significantly more F4/80.sup.+, NK1.1.sup.+, and F4/80.sup.+Ia.sup.+ spleen cells than infected GKO mice; male WT had more CD3.sup.+ cells than male GKO mice. In comparison with those from WT mice, splenocytes from infected GKO mice had significantly higher proliferation in vitro in response to parasite antigen or concanavalin A stimulation and produced significantly higher levels of IL-10 in response to parasite antigen. Infected WT mice produced more parasite-specific immunoglobulin M (IgM), IgG2a, and IgG3 and less IgG1 than GKO mice. Significant gender differences in both GKO and WT mice in peak parasitemia levels, mortality, phenotypes of spleen cells, and proliferation of and cytokine production by splenocytes in vitro were apparent during infection. These results thus provide unequivocal evidence for the central role of endogenous IFN-γ in the development of protective immunity against blood-stage P. chabaudi AS.

L19 ANSWER 5 OF 10 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE

ACCESSION NUMBER: 2000:32164765 BIOTECHNO
TITLE: Expression of proinflammatory cytokines in four regions of the brain in Macaque mulatta (Rhesus) monkeys infected with **Plasmodium** coatneyi
AUTHOR: Tongren J.E.; Yang C.; Collins W.E.; Sullivan J.S.; Lal A.A.; Xiao L.
CORPORATE SOURCE: L. Xiao, Division of Parasitic Diseases, Mail Stop F-12, Ctrs. for Dis. Control/Prevention, 4770 Buford Highway, Atlanta, GA 30341, United States.

SOURCE: American Journal of Tropical Medicine and Hygiene, (2000), 62/4 (530-534), 25 reference(s)
CODEN: AJTHAB ISSN: 0002-9637
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2000:32164765 BIOTECHNO
AB We have characterized brain cytokine expression profiles in the **Plasmodium** coatneyi/rhesus (Macaque mulatta) **malaria** model. Eight rhesus monkeys were included in the study; four were infected with P. coatneyi, and four were used as uninfected controls. All inoculated animals became infected. Eleven days after parasite inoculation, the rhesus monkeys were killed and tissue samples from 4 regions of the brain (cortex and white matter of the cerebrum, cerebellum, and midbrain) were collected for quantitation of mRNA expression of cytokines, adhesion molecules, and inducible **nitric oxide** synthetase (iNOS) by reverse transcriptase-polymerase chain reaction (RT-PCR). The expression levels of tumor necrosis actor-alpha (TNF-α), gamma interferon (IFN-γ), interleukin-1-beta (IL-1β), intercellular adhesion molecule-1 (ICAM-1) and inducible **nitric oxide** synethetase (iNOS) were highest in the cerebellum of infected animals, correlating well with pathologic observations of sequestration of **parasitized** erythrocytes in this region of the brain. Infected animals also had higher TNF-α expression levels in the cortex and IL-1β expression levels in the cortex, white matter, and midbrain. Thus, the expression of pro-inflammatory and T helper-1 (TH-1) cytokines, adhesion molecules, and iNOS appears to predominate in the cerebellum of infected rhesus monkeys.

L19 ANSWER 6 OF 10 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2000-0001536 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Potentiation by febrifugine of host defense in mice against **Plasmodium** berghei NK65
AUTHOR: MURATA K.; TAKANO F.; FUSHIYA S.; OSHIMA Y.
CORPORATE SOURCE: Department of Pharmacognosy, Faculty of Pharmaceutical Sciences, Tohoku University, Sendai 980-8578, Japan; Experimental Station For Medicinal Plant Studies, Faculty of Pharmaceutical Sciences, Tohoku University, Sendai 980-8578, Japan
SOURCE: Biochemical pharmacology, (1999), 58(10), 1593-1601, 31 refs.
ISSN: 0006-2952 CODEN: BCPCA6
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United States
LANGUAGE: English
AVAILABILITY: INIST-1418, 354000080473920100
AN 2000-0001536 PASCAL
CP Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.
AB The effect of febrifugine, the main alkaloidal constituent of an antimalarial crude drug, Dichroa febrifuga Lour., on protective immunity in mice infected with erythrocytic stage **Plasmodium** berghei NK65 was investigated. Febrifugine was administered orally, at a dose of 1 mg/kg/day, to mice before and/or after they were infected intraperitoneally with 2 x 10.sup.6 **parasitized** red blood cells. Then, mortality and the levels of parasitemia and plasma NO.sub.3.sup.- [a degradation product of **nitric oxide** (NO)] were monitored. Febrifugine significantly reduced the mortality and the level of parasitemia. The plasma NO.sub.3.sup.- concentration began to rise within 2 days after treatment with febrifugine and declined to normal in 2 days when the mice were treated orally with febrifugine once a day for 3 consecutive days before parasite infection. This antimalarial activity of febrifugine was reduced by both N.sup.G-monomethyl-L-**arginine** and aminoguanidine. These results indicate that the

increased production of NO by febrifugine plays an important role in host defense against **malaria** infection in mice.

L19 ANSWER 7 OF 10 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 2000:100606 LIFESCI
TITLE: Infected host serum blocks transmission of **Plasmodium** yoelii via a **nitric oxide**-dependent mechanism
AUTHOR: Cao, Ya-Ming; Tsuboi, Takafumi; Liu, Ying-Jie; Torii, Motomi*
CORPORATE SOURCE: Department of Parasitology, Ehime University School of Medicine, Shigenobu-cho, Ehime 791-0295, Japan; E-mail: torii@m.ehime-u.ac.jp
SOURCE: Parasitology International [Parasitol. Int.], (19980900) vol. 47, no. 3, pp. 225-232.
ISSN: 1383-5769.
DOCUMENT TYPE: Journal
FILE SEGMENT: K
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The present study was carried out to clarify whether NO mediates the 'crisis serum' induced transmission-blocking of **Plasmodium** yoelii to the mosquito vector. Mouse serum, obtained 5 days after P. yoelii infection (D5 serum), was administered intravenously into the mice 3 days after P. yoelii infection, followed 4-8 h later by a mosquito feed. The D5 serum demonstrated a marked suppression of oocyst development. Four hours after D5 serum injection to the mice on day 3 after P. yoelii infection, spleens were removed from the mice, and increased levels of nitrite were observed in the spleen cell culture supernatants. The contribution of NO to the D5 serum induced suppression of oocyst formation was investigated using L-NMMA, a selective inhibitor of **nitric oxide** synthase. The reduction of oocyst formation in the mosquito midgut caused by the injection of D5 serum was reversed by the administration of L-NMMA to the mice. Moreover, **malaria parasitized** red blood cell extract possessing the ability to induce NO in mouse spleens also showed the same inhibitory effects on oocyst formation as D5 serum. Together, these results suggest that the D5 serum may contain a **parasitized** red blood cell derived substance(s) which induce the NO production from host effector cells, and then inhibits the transmission of **malaria** parasites to the mosquito vector.

L19 ANSWER 8 OF 10 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 1998:6619 LIFESCI
TITLE: The course of **Plasmodium** chabaudi chabaudi infections in interferon-gamma receptor deficient mice
AUTHOR: Favre, N.; Ryffel, B.; Bordmann, G.; Rudin, W.*
CORPORATE SOURCE: Swiss Trop. Inst., PO Box, Socinstrasse 57, CH-4002, Basel, Switzerland
SOURCE: PARASITE IMMUNOL., (19970800) vol. 19, no. 8, pp. 375-383.
ISSN: 0141-9838.
DOCUMENT TYPE: Journal
FILE SEGMENT: F; K
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Interferon-gamma receptor (IFN- gamma R) deficient mice **parasitized** with blood-stage **Plasmodium** chabaudi chabaudi were used to assess the anti-malarial activity of interferon-gamma (IFN- gamma). There was no significant difference in the parasitaemia between the two types of mice during the first peak of parasitaemia. However, IFN- gamma R deficient mice displayed an increased leucocytosis and a high mortality rate, whereas all of the wild type mice survived. IFN- gamma R deficient mice, unlike wild type mice, developed a pronounced second parasitaemia peak, 9 to 11 days after the first one, with a parasitaemia of up to 65% associated with mortality. Furthermore, increased serum levels of **nitric oxide** (NO) were only found in wild type mice at the peak of parasitaemia, whereas it remained at background levels in IFN- gamma R deficient mice. Parasite-specific

antibody production was not significantly different in IFN- gamma R deficient mice, as compared to wild type mice. In addition, both wild type and IFN- gamma R deficient mice were equally protected upon reinfection. These results indicate a delayed development of protective immunity and imply a crucial function for the IFN- gamma R in the control of blood stage **malaria** during the initial three weeks of infection.

L19 ANSWER 9 OF 10 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 97:15104 LIFESCI
TITLE: In vitro induction of **nitric oxide** by an extract of **Plasmodium** falciparum
AUTHOR: Rockett, K.A.; Kwiatkowski, D.; Bate, C.A.W.; Awburn, M.M.; Rockett, E.J.*; Clark, I.A.
CORPORATE SOURCE: John Curtin School of Medical Research, Australian National University, Canberra, ACT 2601. Australia.
SOURCE: J. INFECT, (1996) vol. 32, no. 3, pp. 187-196. ISSN: 0163-4453.
DOCUMENT TYPE: Journal
FILE SEGMENT: K
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Malarial illness and pathology is generally accepted to be caused by material released when the infected red cells burst at schizogony. The released material has been partially purified and shown to stimulate macrophages to make TNF. We have extended this work to show that these same preparations, isolated from **parasitized** erythrocytes, induce the mouse macrophage cell line RAW 264.7 to produce inducible **nitric oxide** synthase and release **nitric oxide**. By using cytokine-specific antisera we have found that this induction is independent of TNF and IL-1 alpha and partly independent of IL-1 beta .

L19 ANSWER 10 OF 10 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE
ACCESSION NUMBER: 1995:25098573 BIOTECHNO
TITLE: Co-localization of inducible-**nitric oxide** synthase and **Plasmodium** berghei in hepatocytes from rats immunized with irradiated sporozoites
AUTHOR: Klotz F.W.; Scheller L.F.; Seguin M.C.; Kumar N.; Marletta M.A.; Green S.J.; Azad A.F.
CORPORATE SOURCE: EntreMed, Inc., 9610 Medical Center Dr.,Rockville, MD 20850, United States.
SOURCE: Journal of Immunology, (1995), 154/7 (3391-3395) CODEN: JOIMA3 ISSN: 0022-1767
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1995:25098573 BIOTECHNO
AB Both CD8.sup.+ T cells and IFN-gamma (IFN-γ) are important components in the regulation of inducible-**nitric oxide** synthase (iNOS) which contribute to liver stage anti-malarial activity in rodents immunized with irradiated sporozoites. IFN-γ, provided by **malaria**-specific CD8.sup.+ T cells, stimulates liver cells to produce **nitric oxide** (NO) for the destruction of infected hepatocytes or the parasite within these cells. To identify the cell source of iNOS in livers from Brown Norway rats challenged with **Plasmodium** berghei sporozoites, we probed tissue sections with antisera that recognize iNOS and the malarial exoerythrocytic stage parasite. Immunofluorescence analysis of **parasitized** livers demonstrate that 1) iNOS was found in infected hepatocytes, not Kupffer or endothelial cells; and 2) a higher proportion of infected hepatocytes express iNOS in immunized rats compared with naive animals after challenge. There was no immunoreactivity to the iNOS antisera in liver sections of immunized rats 15 h after sporozoite challenge, however, iNOS activity was present in 18% of the infected hepatocytes by 24 h and reached 81% by 31 h. In contrast, <10% of the infected hepatocytes

displayed iNOS activity in naive or immune animals 48 h after challenge. We also found a significant decrease in the ability of the immunized animals to express iNOS in response to sporozoite challenge by accelerating the removal of pre- existing irradiated-attenuated parasites from hepatocytes with the antimalarial drug, primaquine. Therefore, induction and maintenance of iNOS activity were dependent on intrahepatic persistence of the irradiated- attenuated parasite. These results suggest that liver-iNOS expression following sporozoite challenge is restricted to the infected hepatocyte and dependent on the presence of the irradiated-attenuated parasite in immune animals.

```
=> anstey n/au
L20           0 FILE AGRICOLA
L21           2 FILE BIOTECHNO
L22           1 FILE CONFSCI
L23           0 FILE HEALSAFE
'AU' IS NOT A VALID FIELD CODE
L24           0 FILE IMSDRUGCONF
L25           1 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L26           0 FILE MEDICONF
L27           3 FILE PASCAL

TOTAL FOR ALL FILES
L28           7 ANSTEY N/AU

=> weinberg j/au
L29           4 FILE AGRICOLA
L30          14 FILE BIOTECHNO
L31          22 FILE CONFSCI
L32           7 FILE HEALSAFE
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L33           0 FILE IMSDRUGCONF
L34          28 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L35           0 FILE MEDICONF
L36         128 FILE PASCAL

TOTAL FOR ALL FILES
L37         203 WEINBERG J/AU

=> 128 and 137
L38           0 FILE AGRICOLA
L39           0 FILE BIOTECHNO
L40           0 FILE CONFSCI
L41           0 FILE HEALSAFE
L42           0 FILE IMSDRUGCONF
L43           0 FILE LIFESCI
L44           0 FILE MEDICONF
L45           0 FILE PASCAL

TOTAL FOR ALL FILES
L46           0 L28 AND L37

=> granger d/au
L47           2 FILE AGRICOLA
L48           5 FILE BIOTECHNO
L49           8 FILE CONFSCI
L50           0 FILE HEALSAFE
'AU' IS NOT A VALID FIELD CODE
L51           0 FILE IMSDRUGCONF
L52           5 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L53           0 FILE MEDICONF
L54          18 FILE PASCAL

TOTAL FOR ALL FILES
```

L55 38 GRANGER D/AU

=> l55 and plasmodium
L56 0 FILE AGRICOLA
L57 1 FILE BIOTECHNO
L58 0 FILE CONFSCI
L59 0 FILE HEALSAFE
L60 0 FILE IMSDRUGCONF
L61 0 FILE LIFESCI
L62 0 FILE MEDICONF
L63 0 FILE PASCAL

TOTAL FOR ALL FILES
L64 1 L55 AND PLASMODIUM

=> d l57 ibib abs total

L57 ANSWER 1 OF 1 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
ACCESSION NUMBER: 2002:35148112 BIOTECHNO
TITLE: Sequence of **Plasmodium** falciparum chromosomes 2, 10, 11 and 14
AUTHOR: Gardner M.J.; Shallom S.J.; Carlton J.M.; Salzberg S.L.; Nene V.; Shoaibi A.; Ciecko A.; Lynn J.; Rizzo M.; Weaver B.; Jarrahi B.; Brenner M.; Parvizi B.; Tallon L.; Moazzez A.; **Granger D.**; Fujii C.; Hansen C.; Pederson J.; Feldblyum T.; Peterson J.; Suh B.; Angiuoli S.; Pertea M.; Allen J.; Selengut J.; White O.; Cummings L.M.; Smith H.O.; Adams M.D.; Venter J.C.; Carucci D.J.; Hoffman S.L.; Fraser C.M.
CORPORATE SOURCE: M.J. Gardner, Institute for Genomic Research, 9712 Medical Center Drive, Rockville, MD 20850, United States.
E-mail: gardner@tigr.org
SOURCE: Nature, (03 OCT 2002), 419/6906 (531-534), 30 reference(s)
CODEN: NATUAS ISSN: 0028-0836
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 2002:35148112 BIOTECHNO
AB The mosquito-borne malaria parasite **Plasmodium** falciparum kills an estimated 0.7-2.7 million people every year, primarily children in sub-Saharan Africa. Without effective interventions, a variety of factors - including the spread of parasites resistant to antimalarial drugs and the increasing insecticide resistance of mosquitoes - may cause the number of malaria cases to double over the next two decades. To stimulate basic research and facilitate the development of new drugs and vaccines, the genome of **Plasmodium** falciparum clone 3D7 has been sequenced using a chromosome-by-chromosome shotgun strategy. We report here the nucleotide sequences of chromosomes 10, 11 and 14, and a re-analysis of the chromosome 2 sequence. These chromosomes represent about 35% of the 23-megabase P. falciparum genome.

=> anstey n/au
L65 0 FILE AGRICOLA
L66 2 FILE BIOTECHNO
L67 1 FILE CONFSCI
L68 0 FILE HEALSAFE
'AU' IS NOT A VALID FIELD CODE
L69 0 FILE IMSDRUGCONF
L70 1 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L71 0 FILE MEDICONF
L72 3 FILE PASCAL

TOTAL FOR ALL FILES

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L73           7 ANSTEY N/AU

=> l73 and plasmodium
L74           0 FILE AGRICOLA
L75           0 FILE BIOTECHNO
L76           0 FILE CONFSCI
L77           0 FILE HEALSAFE
L78           0 FILE IMSDRUGCONF
L79           0 FILE LIFESCI
L80           0 FILE MEDICONF
L81           0 FILE PASCAL

TOTAL FOR ALL FILES
L82           0 L73 AND PLASMODIUM

=> l73 and malaria
L83           0 FILE AGRICOLA
L84           0 FILE BIOTECHNO
L85           0 FILE CONFSCI
L86           0 FILE HEALSAFE
L87           0 FILE IMSDRUGCONF
L88           0 FILE LIFESCI
L89           0 FILE MEDICONF
L90           0 FILE PASCAL

TOTAL FOR ALL FILES
L91           0 L73 AND MALARIA

=> weinberg j/au
L92           4 FILE AGRICOLA
L93          14 FILE BIOTECHNO
L94          22 FILE CONFSCI
L95           7 FILE HEALSAFE
'AU' IS NOT A VALID FIELD CODE
L96           0 FILE IMSDRUGCONF
L97          28 FILE LIFESCI
'AU' IS NOT A VALID FIELD CODE
L98           0 FILE MEDICONF
L99         128 FILE PASCAL

TOTAL FOR ALL FILES
L100        203 WEINBERG J/AU

=> l100 and plasmodium
L101          0 FILE AGRICOLA
L102          0 FILE BIOTECHNO
L103          0 FILE CONFSCI
L104          0 FILE HEALSAFE
L105          0 FILE IMSDRUGCONF
L106          0 FILE LIFESCI
L107          0 FILE MEDICONF
L108          0 FILE PASCAL

TOTAL FOR ALL FILES
L109          0 L100 AND PLASMODIUM

=> l100 and malaria
L110          0 FILE AGRICOLA
L111          0 FILE BIOTECHNO
L112          0 FILE CONFSCI
L113          0 FILE HEALSAFE
L114          0 FILE IMSDRUGCONF
L115          0 FILE LIFESCI
L116          0 FILE MEDICONF
L117          0 FILE PASCAL

TOTAL FOR ALL FILES
L118          0 L100 AND MALARIA
```

```
=> (MALARIA OR PLASMODIUM) AND ARGININE
L119         1 FILE AGRICOLA
L120        30 FILE BIOTECHNO
L121         1 FILE CONFSCI
L122         0 FILE HEALSAFE
L123         0 FILE IMSDRUGCONF
L124        31 FILE LIFESCI
L125         0 FILE MEDICONF
L126        22 FILE PASCAL

TOTAL FOR ALL FILES
L127        85 (MALARIA OR PLASMODIUM) AND ARGININE

=> (MALARIA OR PLASMODIUM)(10A)(ARGININE or nitrosothiol)
L128         1 FILE AGRICOLA
L129         4 FILE BIOTECHNO
L130         1 FILE CONFSCI
L131         0 FILE HEALSAFE
L132         0 FILE IMSDRUGCONF
L133         7 FILE LIFESCI
L134         0 FILE MEDICONF
L135         5 FILE PASCAL

TOTAL FOR ALL FILES
L136        18 (MALARIA OR PLASMODIUM)(10A)(ARGININE OR NITROSOTHIOL)

=> dup rem
ENTER L# LIST OR (END):l136
DUPLICATE IS NOT AVAILABLE IN 'IMSDRUGCONF, MEDICONF'.
ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE
PROCESSING COMPLETED FOR L136
L137         11 DUP REM L136 (7 DUPLICATES REMOVED)

=> d l137 ibib abs total

L137 ANSWER 1 OF 11  LIFESCI    COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER:   2004:34250  LIFESCI
TITLE:              Molecular dissection of water and glycerol permeability of
                    the aquaglyceroporin from Plasmodium falciparum by
                    mutational analysis
AUTHOR:             Beitz, E.; Pavlovic-Djuranovic, S.; Yasui, M.; Agre, P.;
                    Schultz, J.E.
CORPORATE SOURCE:   Department of Pharmaceutical Biochemistry, University of
                    Tuebingen, Morgenstelle 8, D-72076 Tuebingen, Germany;
                    E-mail: eric.beitz@uni-tuebingen.de
SOURCE:             Proceedings of the National Academy of Sciences, USA [Proc.
                    Natl. Acad. Sci. USA], (20040203) vol. 101, no. 5, pp.
                    1153-1158.
                    ISSN: 0027-8424.
DOCUMENT TYPE:      Journal
FILE SEGMENT:       K; G
LANGUAGE:           English
SUMMARY LANGUAGE:   English
AB   The selectivity of aquaporins for water and solutes is determined by pore
     diameter. Paradoxically, the wider pores of glycerol facilitators restrict
     water passage by an unknown mechanism. Earlier we characterized an
     aquaglyceroporin from Plasmodium falciparum with high permeability for
     both glycerol and water. We use point mutations to demonstrate that amino
     acids directly lining the pore are not responsible for the excellent water
     permeability of the Plasmodium aquaglyceroporin but affect permeability of
     pentitols. Within a conserved WET triad in the extracellular C-loop we
     identified a Plasmodium aquaglyceroporin-specific glutamate
     (E125) located in proximity to a conserved arginine (R196) at
     the pore mouth. Mutation of E125 to serine largely abolished water
     permeability. Concomitantly, the activation energy for water permeation
     was increased by 4 kcal/mol. Mutation of the adjacent tryptophan to
     cysteine led to irreversible inhibition of water passage by Hg super(2+).
```

This unequivocally proves the proximity of the couple W124/E125 close to the pore mouth. We conclude that in the Plasmodium aquaglyceroporin the electrostatic environment at the extracellular pore entry regulates water permeability.

L137 ANSWER 2 OF 11 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 2004:5714 LIFESCI
TITLE: Low plasma **arginine** concentrations in children with cerebral **malaria** and decreased nitric oxide production
AUTHOR: Lopansri, B.K.; Anstey, N.M.; Brice Weinberg, J.; Stoddard, G.J.; Hobbs, M.R.; Levesque, M.C.; Mwaikambo, E.D.; Granger, D.L.
CORPORATE SOURCE: Division of Infectious Diseases, 30 North 1900 East, Room 4B319, Salt Lake City, UT 84132, USA; E-mail: dgranger@hsc.utah.edu
SOURCE: Lancet, (20030222) vol. 361, no. 9358, pp. 676-678. ISSN: 0099-5355.
DOCUMENT TYPE: Journal
FILE SEGMENT: K
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Nitric oxide (NO) production and mononuclear cell NO synthase 2 (NOS2) expression are high in healthy Tanzanian children but low in those with cerebral malaria. Factors that downregulate NOS2 also diminish factors involved in cellular uptake and biosynthesis of L-arginine, the substrate for NO synthesis. We therefore postulated that L-**arginine** concentrations would be low in individuals with cerebral **malaria** . We measured concentrations of L-**arginine** in cryopreserved plasma samples from Tanzanian children with and without **malaria**. L-**arginine** concentrations were low in individuals with cerebral **malaria** (mean 46 mu mol/L, SD 14), intermediate in those with uncomplicated malaria (70 mu mol/L, 20), and within the normal range in healthy controls (122 mu mol/L, 22; p<0.0001). Analysis by logistic regression showed that hypoargininaemia was significantly associated with cerebral malaria case-fatality. Hypoargininaemia may contribute to limited NO production in children with cerebral malaria and to severe disease.

L137 ANSWER 3 OF 11 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2003-0197267 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2003 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): Low plasma **arginine** concentrations in children with cerebral **malaria** and decreased nitric oxide production
AUTHOR: LOPANSRI Bert K.; ANSTEY Nicholas M.; WEINBERG J. Brice; STODDARD Gregory J.; HOBBS Maurine R.; LEVESQUE Marc C.; MWAIKAMBO Esther D.; GRANGER Donald L.
CORPORATE SOURCE: Division of infectious Diseases, VA and University of Utah Medical Centers, Salt Lake City, UT, United States; Division of Infectious Diseases, Menzies School of Health Research and Flinders University Northern Territory Clinical School, Darwin, Australia; Division of Hematology, VA and Duke University Medical Centers, Durham, NC, United States; Division of Clinical Epidemiology, University of Utah School of Medicine, Salt Lake City, UT, United States; Department of Paediatrics, Hubert Kairuki Memorial University, Dar es Salaam, Tanzania, United Republic of
SOURCE: Lancet : (British edition), (2003), 361(9358), 676-678, 5 refs.
ISSN: 0140-6736 CODEN: LANCAO
DOCUMENT TYPE: Journal; Letter
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom
LANGUAGE: English

AVAILABILITY: INIST-5004, 354000107761520150
AN 2003-0197267 PASCAL
CP Copyright .COPYRGT. 2003 INIST-CNRS. All rights reserved.
AB Nitric oxide (NO) production and mononuclear cell NO synthase 2 (NOS2) expression are high In healthy Tanzanian children but low In those with cerebral malaria. Factors that downregulate NOS2 also diminish factors Involved in cellular uptake and biosynthesis of L-arginine, the substrate for NO synthesis. We therefore postulated that L-**arginine** concentrations would be low In Individuals with cerebral **malaria** . We measured concentrations of L-**arginine** In cryopreserved plasma samples from Tanzanian children with and without **malaria** . L-**arginine** concentrations were low in individuals with cerebral **malaria** (mean 46 µmol/L, SD 14), Intermediate in those with uncomplicated malaria (70 µmol/L, 20), and within the normal range in healthy controls (122 µmol/L, 22; p<0.0001). Analysis by logistic regression showed that hypoargininaemia was significantly associated with cerebral malaria case-fatality. Hypoargininaemia may contribute to limited NO production In children with cerebral malaria and to severe disease.

L137 ANSWER 4 OF 11 PASCAL COPYRIGHT 2005 INIST-CNRS. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2000-0407358 PASCAL
COPYRIGHT NOTICE: Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.
TITLE (IN ENGLISH): **Arginine** vasopressin secretion in Kenyan children with severe **malaria**
AUTHOR: SOWUNMI A.; NEWTON C. R. J. C.; WARUIRU C.; LIGHTMAN S.; DUNGER D. B.
CORPORATE SOURCE: Centre for Geographical Medicine (Coast), Kenya Medical Research Institute, Kilifi, Kenya; Department of Pharmacology and Therapeutics, University of Ibadan, Nigeria; Institute of Child Health, London, United Kingdom; Department of Medicine, University of Bristol, United Kingdom; Department of Paediatrics, Oxford University, Oxford, United Kingdom
SOURCE: Journal of tropical pediatrics : (1980), (2000), 46(4), 195-199, 18 refs.
ISSN: 0142-6338 CODEN: JTRPAO
DOCUMENT TYPE: Journal
BIBLIOGRAPHIC LEVEL: Analytic
COUNTRY: United Kingdom
LANGUAGE: English
AVAILABILITY: INIST-10240, 354000090828280010
AN 2000-0407358 PASCAL
CP Copyright .COPYRGT. 2000 INIST-CNRS. All rights reserved.
AB Hyponatraemia is common in African children with severe malaria, but the cause is unknown. We measured plasma sodium (p[Na]) and **arginine** vasopressin concentrations (p[AVP]) in 30 consecutive children with severe **malaria** (19 had cerebral malaria), on admission, at 48 and 96h after admission. Hyponatraemia (p[Na] <130 mmol/l) occurred in 53 per cent of the children and was unrelated to peripheral parasite density, dehydration or abnormal renal function. The highest p[AVP] were seen in patients with cerebral malaria. Overall, p[AVP] declined 96 h after treatment. In children with hyponatraemia (cerebral and non-cerebral), p[AVP] levels were not suppressed and in 67 per cent of cases they were deemed inappropriate. Inappropriate AVP secretion is common in children with severe malaria and may influence fluid therapy after correction of initial dehydration.

L137 ANSWER 5 OF 11 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2005) on STN DUPLICATE 1
ACCESSION NUMBER: 1999:8019 AGRICOLA
DOCUMENT NUMBER: IND21959968
TITLE: The mosquito Anopheles stephensi limits malaria parasite development with inducible synthesis of

nitric oxide.
AUTHOR(S): Luckhart, S.; Vodovotz, Y.; Cui, L.W.; Rosenberg, R.
CORPORATE SOURCE: Walter Reed Army Institute of Research, Washington, DC.
AVAILABILITY: DNAL (500 N21P)
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, May 12, 1998. Vol. 95, No. 10. p. 5700-5705
Publisher: Washington, D.C. : National Academy of Sciences,
CODEN: PNASA6; ISSN: 0027-8424
NOTE: Includes references
PUB. COUNTRY: District of Columbia; United States
DOCUMENT TYPE: Article; Conference
FILE SEGMENT: U.S. Imprints not USDA, Experiment or Extension
LANGUAGE: English
AB We have discovered that the mosquito Anopheles stephensi, a natural vector of human malaria, limits parasite development with inducible synthesis of nitric oxide (NO). Elevated expression of A. stephensi NO synthase (NOS), which is highly homologous to characterized NOS genes, was detected in the midgut and carcass soon after invasion of the midgut by Plasmodium. Early induction is likely primed by bacterial growth in the blood meal. Later increases in A. stephensi NOS expression and enzyme activity occurred at the beginning of sporozoite release. Circulating levels of nitrite/nitrate, end-products of NO synthesis, were significantly higher in **Plasmodium**-infected mosquitoes. Dietary provision of the NOS substrate L-**arginine** reduced **Plasmodium** infections in A. stephensi. In contrast, dietary provision of a NOS inhibitor significantly increased parasite numbers in infected mosquitoes, confirming that A. stephensi limits Plasmodium development with NO.

L137 ANSWER 6 OF 11 LIFESCI COPYRIGHT 2005 CSA on STN DUPLICATE 2
ACCESSION NUMBER: 1999:726 LIFESCI
TITLE: Killing of blood stage **Plasmodium** vinckei petteri by spleen macrophages through L-**arginine** dependent mechanism
AUTHOR: Supargiyono,; Cox, F.E.G.
CORPORATE SOURCE: Cent. for Trop. Med., Dep. Parasitol., Fac. Med., Gadjah Mad Univ., Yogyakarta, Indonesia
SOURCE: SOUTHEAST ASIAN J. TROP. MED. PUBLIC HEALTH, (19970900) vol. 28, no. 3, pp. 489-495.
ISSN: 0038-3619.
DOCUMENT TYPE: Journal
FILE SEGMENT: K
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A series of experiments was carried out to investigate the involvement of the L-arginine-dependent effector mechanism (LADEM) in the killing of the blood stages of the rodent malaria parasite, Plasmodium vinckei petteri, by activated spleen macrophages in vitro. P.v.petteri-infected red blood cells were co-incubated with spleen macrophages from normal mice which had previously received 10 super(8) Mycobacterium bovis (BCG) 5 days earlier, in the presence of 0.1 mu g/ml LPS with and without 0.1 mM L-NMMA, an L-arginine analogue which inhibits LADEM, for 16 hours. The viability of the parasites was assessed according to their infectivity following inoculation into experimental mice. Incubation of parasites with spleen macrophages in the presence of LPS without L-NMMA reduced the parasite viability to about 3%. When L-NMMA was included in the culture, inhibition of parasite killing was observed, resulting in an increase of parasite viability to about 21%. These data provide evidence to suggest that spleen macrophages play an important role as effector cells in the immune mechanisms against P.v.petteri infection, and that the parasite killing of these cells, at least in part, was mediated by LADEM.

L137 ANSWER 7 OF 11 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN DUPLICATE
ACCESSION NUMBER: 1993:23054466 BIOTECHNO
TITLE: Malaria antigen and cytokine-induced production of

reactive nitrogen intermediates by murine macrophages: No relevance to the development of experimental cerebral malaria
AUTHOR: Kremsner P.G.; Nussler A.; Neifer S.; Chaves M.F.; Bienzle U.; Senaldi G.; Grau G.E.
CORPORATE SOURCE: Landesinstitut fur Tropenmedizin, Engeldamm 62,1020 Berlin, Germany.
SOURCE: Immunology, (1993), 78/2 (286-290)
CODEN: IMMUAM ISSN: 0019-2805
DOCUMENT TYPE: Journal; Article
COUNTRY: United Kingdom
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1993:23054466 BIOTECHNO
AB The in vitro production of reactive nitrogen intermediates (RNI) by murine macrophages was evaluated in response to heat-stable malaria antigen and cytokines. Malaria antigen, interferon-γ (IFN-γ) and tumour necrosis factor (TNF) induced RNI production in macrophages in a dose-dependent way. RNI production steadily increased over a 2-day period and was enhanced when the malaria antigen was co-incubated with IFN-γ and/or TNF. RNI production induced by either IFN-γ or malaria antigen or a combination of the two was suppressed by pentoxifylline in a dose-dependent manner. Pentoxifylline did not significantly influence TNF-induced RNI production. L-N-monomethyl **arginine** reduced **malaria** antigen, IFN-γ and TNF-induced RNI production when these reagents were used in combination or alone. An anti-TNF monoclonal antibody (mAb) reduced IFN-γ-induced RNI production, but did not significantly alter the malaria antigen-induced RNI synthesis by macrophages. The influence of inhibitors of nitric oxide synthase, L-N-monomethyl arginine and N ω-nitro-L- **arginine**, was studied in experimental cerebral **malaria**. They did not exert any significant effect on the development of cerebral malaria in Plasmodium berghei ANKA-infected CBA/J mice.

L137 ANSWER 8 OF 11 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN DUPLICATE
ACCESSION NUMBER: 1991:21213393 BIOTECHNO
TITLE: IFN-γ inhibits development of **Plasmodium** berghei exoerythrocytic stages in hepatocytes by an L-**arginine**-dependent effector mechanism
AUTHOR: Mellouk S.; Green S.J.; Nacy C.A.; Hoffman S.L.
CORPORATE SOURCE: Malaria Program, Naval Medical Research Inst., 12300 Washington Avenue,Rockville, MD 20852, United States.
SOURCE: Journal of Immunology, (1991), 146/11 (3971-3976)
CODEN: JOIMA3 ISSN: 0022-1767
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1991:21213393 BIOTECHNO
AB Primary cultures of BALB/cJ hepatocytes treated with 10.sup.3 U/ml rIFN-γ consistently inhibited intracellular **Plasmodium** berghei liver schizont development by 50 to 70%. Monomethyl-L-**arginine** (N(G)MMLA), the competitive inhibitor of L-arginine as substrate for production of nitric oxides by hepatocytes, reversed the activity of IFN-γ on these malaria-infected cells. Reversal of IFN-γ activity by N(G)MMLA was dose dependent and was maximal at 0.5 mM N(G)MMLA. Depletion of L-arginine by addition of arginase to the culture medium blocked the capacity of IFN-γ to inhibit parasite development in hepatocytes; addition of excess L-arginine to cultures treated with IFN-γ in the presence of N(G)MMLA competitively restored IFN-γ capacity to activate hepatocyte anti-parasite activity. TNF-α was neither required for IFN-γ activity, nor effective at any concentration tested as an inhibitor of schizont development by itself in primary hepatocytes. These data strongly suggest that the action of IFN-γ on P. berghei-infected hepatocytes is to induce the production of L-arginine-derived nitrogen oxides that are

toxic for the intracellular parasite.

L137 ANSWER 9 OF 11 BIOTECHNO COPYRIGHT 2005 Elsevier Science B.V. on STN
DUPLICATE
ACCESSION NUMBER: 1991:21072184 BIOTECHNO
TITLE: L-**Arginine**-dependent destruction of intrahepatic **malaria** parasites in response to tumor necrosis factor and/or interleukin 6 stimulation
AUTHOR: Nussler A.; Drapier J.-C.; Renia L.; Pied S.; Miltgen F.; Gentilini M.; Mazier D.
CORPORATE SOURCE: INSERM U-313, 91 Bd de l'Hopital,F-75013 Paris, France.
SOURCE: European Journal of Immunology, (1991), 21/1 (227-230)
CODEN: EJIMAF ISSN: 0014-2980
DOCUMENT TYPE: Journal; Article
COUNTRY: Germany, Federal Republic of
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1991:21072184 BIOTECHNO
AB There is growing evidence that cytokines (interleukin ¢IL! 1, IL 6, interferon-γ, tumor necrosis factor ¢TNF!) directly or indirectly interfere with the intrahepatic development of malaria parasites. Recent work in our laboratory clearly showed that TNF can affect the hepatic development of parasites via IL 6 secreted by liver nonparenchymal cells. The possible participation of an L-arginine-dependent effector mechanism has been studied to explain the TNF/IL 6-induced inhibition. We thus investigated if N(G)monomethyl-L-arginine and Nω-nitro-L-arginine, two specific inhibitors of inorganic nitrogen oxide synthesis from L-arginine, were able to affect the inhibitory effect of TNF and/or IL 6 in co-cultures. At 0.1 and 0.5 mM both L-arginine analogues reversed the inhibitory effect of these cytokines. An interesting observation is that L-arginine analogues enhance schizont development in the absence of prior cytokine contact. This result indicates an hepatic basal L-arginine-dependent anti-parasitic activity which might explain the existence of self-degenerating hepatic forms as previously reported.

L137 ANSWER 10 OF 11 LIFESCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 91:2403 LIFESCI
TITLE: L-**arginine**-dependent destruction of intrahepatic **malaria** parasites in response to tumor necrosis factor and/or interleukin 6 stimulation.
AUTHOR: Nuessler, A.; Drapier, J.C.; Renia, L.; Pied, S.; Miltgen, F.; Gentilini, M.; Mazier, D.
CORPORATE SOURCE: INSERM U-313, 91, Bd de l'Hop., F-75013 Paris, France
SOURCE: EUR. J. IMMUNOL., (1991) vol. 21, no. 1, pp. 227-230.
DOCUMENT TYPE: Journal
FILE SEGMENT: F; K
LANGUAGE: English
SUMMARY LANGUAGE: English
AB There is growing evidence that cytokines (interleukin (IL) 1, IL 6, interferon- gamma , tumor necrosis factor (TNF)) directly or indirectly interfere with the intrahepatic development of **malaria** parasites. The possible participation of an L-**arginine**-dependent effector mechanism has been studied to explain the TNF/IL 6-induced inhibition. We investigated if N super(G)monomethyl-L-arginine and N omega -nitro-L-arginine, two specific inhibitors of inorganic nitrogen oxide synthesis from L-arginine, were able to affect the inhibitory effect of TNF and/or IL 6 in co-cultures. An interesting observation is that L-arginine analogues enhance schizont development in the absence of prior cytokine contact. This result indicates an hepatic basal L-arginine-dependent anti-parasitic activity which might explain the existence of self-degenerating hepatic forms as previously reported.

L137 ANSWER 11 OF 11 CONFSCI COPYRIGHT 2005 CSA on STN
ACCESSION NUMBER: 90:41002 CONFSCI
DOCUMENT NUMBER: 91010625

TITLE: L-**arginine**-dependent effector mechanism affects intrahepatic **malaria** parasite

AUTHOR: Nussler, A.; Drapier, J.C.; Renia, L.; Pied, S.; Miltgen, F.; Mazier, D.

CORPORATE SOURCE: U. 313 INSERM, Groupe Hosp. Pitie-Salpetriere, Paris, France

SOURCE: John Wiley & Sons, Inc., Subscription Department, 7th floor, 605 Thrid Avenue, New York, NY 10158, USA, Journal of Leukocyte Biology, Supplement 1, 1990, ISSN: 0741-5400 Paper No. 107.
Meeting Info.: 904 5003: 27th National Meeting of the Society for Leukocyte Biology, 12th International Research Congress, and the 12th Leukocyte Culture Conference (9045003). Heraklion, Crete (Greece). 14-18 Oct 1990. Society for Leukocyte Biology.

DOCUMENT TYPE: Conference
FILE SEGMENT: DCCP
LANGUAGE: UNAVAILABLE

(malaria or plasmodium)(15A)(nitrosothiol)